

EFFECT OF FINANCIAL RATIO ANALYSIS ON PERFORMANCE OF SELECTED COMPANIES IN NIGERIA

Ndum, Ngozi B.

Department of Accountancy
Nnamdi Azikiwe University, Awka
Mail: ngodona71@gmail.com

Abstract

This study determined the effect of financial ratio analysis on performance of Food and Beverages companies in Nigeria, using market ratio, profitability ratio and return on assets. Ex-post facto research design was employed in the study. In this study, simple linear regression was utilized. The data were obtained from the annual reports of the firms under study for a six (6) year period covering from 2015-2020. The result of the regression analysis reveals that market ratio and profitability ratio significantly affect return on assets of food and beverage companies in Nigeria at 5% level of significance. It was recommended that company management should utilize its cost efficiently in generating more income for the company, thus maximizing shareholders wealth through improved earnings per share.

Keywords: Market risk, Profitability ratio and return on assets

INTRODUCTION

For some people, financial analysis has varied meanings. The liquidity of the company under consideration is what trade creditors are most concerned with. They have short-term claims, and a review of the firm's liquidity is the best way to determine if it can meet these obligations. Accounting ratios, according to Brigham & Ehrhardt (2010), are made to aid in the analysis of financial accounts. A planning and control tool is the use of accounting ratios. Accounting ratio analysis is used to assess an organization's performance; it seeks to identify its strong and weak aspects and gives solutions by outlining relevant plans based on the evaluator's particular interests. Ratio analysis is a crucial technique for gauging business performance and selecting wise investments. Rashid (2018) claimed that financial ratio analysis helps with "analyzing and assessing linkages between various pieces of financial information throughout the company's history. They provide information about events as they happened throughout time and help assess a company's financial health.

In their efforts to maintain the company's stability and grow its market share, management places a specific emphasis on the financial ratio analysis of corporate performance (Costea, 2006). Ezejiofor, Nwakoby and Okoye (2016) reported a significant difference between the profitability of manufacturing firms with that of commercial banks in Nigeria. In a similar vein, the modernization of today's economies and industries is becoming ever more disorganized, and the competition among businesses for market share is getting fiercer. This has been made possible by, in particular, the increased relevance of innovation (struggle among firms for greater market share). Similar to this, the growth of financial institutions has made it possible for businesses to complete projects more quickly with the help of outside funding. In general, the information age's rapid pace has altered the way businesses run, bringing clients and vendors closer together. We think it is essential to examine the corporate performance of food and beverage companies in Nigeria by assessing it with accounting ratios for all of the above reasons and more. This research intended to determine the:

- i. Effect of market ratio and return on assets of food and beverage companies in Nigeria.
- ii. Effect of profitability ratio and return on assets of food and beverage companies in Nigeria.

CONCEPTUAL REVIEW

Financial Ratio Analysis

Krishnan (2020) asserts that the users and the intended use of the information often define the ratios used to assess a company's financial position. Rashid (2018) contends that although indicators predicting future earnings potential and profitability are appropriate for investors, those measuring a firm's capacity to fulfill its obligations may be crucial for creditors. Financial ratios, which are based on information from financial accounts, are frequently used to forecast the future.

Financial ratios are relationships between two distinct quantitative financial data points that are logically connected to one another. This connection is seen as a useful financial indication that may be used by various financial data consumers. Using financial ratios, Ezejiofor, Olise, and John-Akamelu (2017) discovered that there are significant differences between the profitability of telecommunication companies and that of commercial banks in Nigeria, as well as between the coverage ratio of telecommunication companies and that of commercial banks in Nigeria and the debt ratio of telecommunication companies and commercial banks in Nigeria. According to Brigham and Ehrhardt (2010), financial ratios are intended to aid in evaluating. Financial ratios

are employed as a tool for planning and management. Users of internal and external financial data who need to make decisions about investment and performance evaluation utilize financial ratios. Financial ratio analysis is used to assess an organization's performance in order to identify its strengths and weaknesses. It then gives remedies by outlining suitable plans. There are several standards and different financial ratios, but the selection of ratios relies on the activity of the business and the goal of the analysis (Tofeeq, 1997).

Profitability Ratio and Performance Evaluation

Profitability ratios gauge a company's capacity to turn a profit in relation to the costs that go along with it. A higher profitability ratio than in the last financial reporting period indicates that the company's financial situation is getting better. To evaluate how profitable a company is in comparison to its rivals, a profitability ratio can also be compared to the ratio of another similar organization. The return on equity ratio, return on assets, profit margin, gross margin, and return on capital employed are a few instances of significant profitability ratios.

All company endeavors must prioritize profitability because without it, they cannot sustain themselves over the long term. As a result, estimating future profitability and measuring present or historical profitability are crucial. The most crucial indicator of a company's success is its ability to be profitable; a company that is not lucrative cannot continue. Because it gauges performance, success, and improves the firm's reputation, profitability of the firm plays a crucial part in the structure and development of the firm (Nousheen & Arshad, 2013). Profitability acts as a crucial gauge of economic performance since it offers a concise assessment of a company's success or failure. As a result, a highly lucrative company can provide its owners with a sizable return on their investment. The capacity of a business to make more money than it spends relative to its capital base is what is known as profitability (Lartey, Antwi, & Boadi, 2013). Profitability was also described by Owolabi and Obida (2012) as the capacity of an enterprise to generate profits from all of its commercial operations. It gauges how effectively management uses organizational resources to advance the enterprise. It is possible to think of profitability as a relative concept that may be measured in terms of profit and its relationship to other factors that can have a direct impact on the profit. The relationship between income and a balance sheet metric that shows the relative ability to generate income from assets is known as profitability. Profitability is assessed in relation to the magnitude of net accounting profit (return on asset, return on capital employed, return on equity and others). Therefore, a stable and successful business is better suited to withstand shocks and contribute to the stability of the nation's economy in general.

Profitability ratios serve as gauges of a company's general effectiveness. It is frequently applied as a gauge of the company's earnings over a given time period based on its level of sales, assets, capital employed, net worth, and earnings per share. The firm's earning potential is measured by its profitability ratios, which are viewed as a sign of its expansion, success, and management. For instance, profitability ratios are important to creditors as they show whether the business can pay its interest obligations. Profitability also interests shareholders. This shows their investments' progress and rate of return. Profitability ratios examine how much profit was made in relation to sales, total assets, and net value of companies to determine how well a company is operating. According to James (2009), an analysis of the income statement and balance sheet's profitability ratios is used to gauge a company's profitability. The two crucial reports that display the company's profit and net worth are the income statement and balance sheet (currently referred to

as Statement of Comprehensive Income and Statement of Financial Position, respectively). Its studies demonstrate how successfully the business is performing in terms of earnings relative to sales. It also demonstrates how effectively the assets are generating income. Discuss the profitability ratios measures of margins and returns, including gross, operating and/or net profits, the ROA ratio, the ROE ratio, and the ROCE ratio (Thachappilly, 2009). However, he clarified that the surplus created by sales over costs is what determines gross profit. So, gross profit margin is calculated as gross profit divided by net sales or revenue. Additionally, operating profits are calculated by subtracting marketing, administrative, and R&D expenses from the gross margin. Nevertheless, He clarifies that Operating Profit Margin is determined by dividing Operating Profit by Net Sales or Revenue. The three categories of return on resources used, including ROA, ROE, and ROCE, are also explained. Initial Return on Assets = $\text{Net Profit} / (\text{Total Assets at Period's Beginning} + \text{Total Assets at Period's End}) / 2$. The average total assets used during the course of the year serves as the denominator. Return on Equity is calculated as Net Profit divided by (shareholders' equity at the start of the year plus shareholder equity at the end of the year) divided by two. Return on Capital Employed (ROCE) ratio: Net Profit divided by (Average Shareholders' fund).

Market Ratio and Firm Performance Evaluation

Market ratios assist investors in forecasting their potential returns on particular investments. The earnings may come from increased stock value or upcoming dividends. The expected future stock price and the dividends that investors can expect to receive can both be estimated using the existing earnings and distributions. Dividend yield, earnings per share, price-to-earnings ratio, and dividend payout ratio are important market ratios.

Share ownership ratio is another name for market value ratio. It is known as the stockholders' method of evaluating their current and potential investments in a company. The investors in this ratio are interested in how specific factors affect the value of their assets. Analysis of the anticipated future benefits the stockholder. The study's findings indicated that the market value per share is unaffected by returns, risks, or dividends. The findings did show a substantial correlation between share prices and cash flow, though. In his 2005 study, AL Kurdi examined the potential of available accounting data to forecast share prices for a sample of 110 Jordanian public businesses listed on the Amman Security Exchange between 1994 and 2004. The findings showed that there is a correlation between the share of insurance public businesses and their released accounting information. The findings showed that market information, as opposed to accounting information, is better at forecasting share prices. For the year 2003, the Amman Security Exchange listed 40 Jordanian public businesses as a sample for the study. The findings indicated that the market price per share and the ratios of net profits to equity, net profits to total assets, and dividends to net profits all have a positive, statistically significant association. Additionally, a significant negative correlation between the market price per share and the ratios of fixed assets to total assets, debtors to total cash sources, and wages to total expenses was also demonstrated by the results.

Empirical Studies

Almansoori et al. (2021) looked into how social media platforms affected the hotel industry. The survey's results showed that social media is significantly contributing to the expansion of hotels and resorts. In order to prevent discrepancies in the social networking platform, strict tools should be applied. Social media helps the hotel industry grow its revenue at a low cost of

marketing, but it also has drawbacks that result in declining revenue. Alkhyeli et alresearch . 's in 2021 focused on Pfizer's financial situation. The study used the ratio analysis approach to ascertain the company's position from 2017 to 2020. Among the ratios looked at were those for profitability, debt, cash flow, and liquidity. Pfizer's results were revealed by the ratios, which show that the company's performance is typical when compared to the market. The organization was exceptional in a few areas. Due to weak liquidity ratio, Pfizer's performance made it clear that company lacked the funds to repay its debts. However, the company's profit margin was large, which convinced any investor to invest in the business. The authors of this research paper, Maglad, Shaheen, and Samkari (2019), examined the financial performance of the entire business before deciding to change its status from private to public and list it on the stock market. Public organizations typically have higher profitability ratios than private businesses, such as ROA and ROE. Additionally, it appears that the price of crude oil has a substantial impact on public companies' financial performance, as the trend in their revenue is directly correlated with that of oil prices. Hussaini (2016) investigated corporate liquidity management, which was crucial in preserving the company's financial health during typical commercial operations from 2009 to 2014. The study's data came from the annual reports and financial statements of the companies. The data was empirically validated between the dependent and independent variables after the OLS regression was run to ensure the validity of statistical inferences. Robust OLS was used to assess the study's model using multiple regressions. The analysis's findings showed that quick ratio, accounts payable, IFRS, firm size, and ROA of listed food and beverage firms in Nigeria all had strong positive relationships, whereas accounts receivable was found to have an inversely significant relationship with ROA of listed food and beverage firms in Nigeria. The elements that affect the financial performance of listed food and beverage firms in Nigeria were identified by Eitokpa (2015). The literature of earlier research was explored for the dependent and independent variables of the study. Leverage is calculated as total debt divided by total assets, while intangibles represent the total cost required to acquire the assets. The liquidity ratio is calculated as current assets divided by current liabilities. Data on ROA, business size, firm age, leverage, intangible assets, and liquidity ratio were taken from public annual reports of five out of nine (9) of these firms from 2004 to 2013. The study employed a correlation research approach. Firm age, leverage, and liquidity ratio were found to be factors in the fixed effect regression model's results that determined the financial performance of listed foods and beverage companies. Data from all 33 companies listed on the Ghana Stock Exchange were used by Ware (2015) to analyze the relationship between liquidity and profitability and its impact on profitability in a challenging economic environment. The study's findings were obtained using descriptive analysis, and it was concluded that managers can raise profitability by implementing a good credit policy, a short cash conversion cycle, and a rise in current ratios. Liquidity, as measured by the companies' Cash Conversion Cycle, Average Collection Period, and Average Payment Period, has no statistically significant impact on profitability.

METHODOLOGY

Ex-Post Facto research design was used in this study to analyze the corporate performance of Nigerian food and beverage companies.

The population comprises publicly traded food and beverage businesses on the Nigerian Stock Exchange that have to have consistently produced their annual reports during the time period of (2015 - 2020). Food and beverage businesses are all engaged in the preparation, packaging, and

distribution of raw food materials. They contain packaged goods, alcoholic and non-alcoholic beverages, as well as fresh, cooked delicacies. Therefore, everything other than medications intended for human consumption goes through this industry. The food and beverage company was chosen for this research because of the sizeable growth of the company as a whole, its sustained profitability and the possible change of the company. In addition, the rapid growth and development that is on-going in the industry as a result of high priority given by the government to the manufacturing sector is also a reason for the choice of the industry.

The industry consists of twenty-five (25) quoted companies in Nigeria stock exchange. The sample size of this study was selected using purposive sampling techniques based on the availability of data. Twenty (20) sampled quoted food and beverage companies listed with the Nigerian Stock Exchange were used to ensure statistically valid generalization. Data were extracted from annual reports of the sampled companies.

Techniques of Data Analysis

The study employs simple linear regression models using a set of cross-sectional data as technique of analysis. Multiple linear regression models are very important in investigating the predictable power of the independent variable on the dependent variable.

Model of Specification

In the light of the above methodology and theoretical framework employed to capture corporate performance through ratio analysis of food and beverage companies in Nigeria, a simple linear regression model using a set of cross-sectional data was developed for the study.

The study model is in the following form:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \mu$$

Where:

- Y = Performance (dependent variable)
- X = Financial Ratio (/independent Variable)
- β_0 = constant term (intercept)
- β_1 - β_2 = Coefficients of performance
- μ = Error term (stochastic term)

Explicitly, the equation can be defined as:

$$\text{Return on assets} = f(\text{Financial Ration analysis}) + \mu$$

Representing the equations with the variables of the construct, hence the equations below are formulated:

Specifically:

$$\begin{aligned} \text{ROA} &= \alpha + \beta_1 \text{MKR} + \mu & - & & - & & - & & - & & - & & \text{i} \\ \text{ROA} &= \alpha + \beta_1 \text{PFR} + \mu & - & & - & & - & & - & & - & & \text{ii} \end{aligned}$$

Where;

- α = Constant
- β_1 = Coefficients of explanatory variables
- μ = Error term over cross-section and time
- ROA = Return on Assets (dependent variable)
- MTR= Market ratio (independent variable)
- PFR = Profitability ratio (independent variable)

Measurements of Variables

Dependent variable

The dependent variable of the study is (Corporate Performance) Return on asset was used to proxy firm's corporate performance. ROA is measured as earnings before interest and tax scaled by total asset.

Independent variables

MTR= Market ratio. Earnings per share are used as a proxy for market ratio.

$$\text{Earnings per share} = \frac{\text{Net Income} - \text{Preferred Dividends}}{\text{Average Common Shares}}$$

PFR = Profitability ratio. Return on equity is used as a proxy for profitability ratio.

$$\text{Return on Equity} = \frac{\text{Net Income}}{\text{Shareholders' Equity}}$$

Decision Rule

Accept the null hypothesis, if the P-value of the test is greater than 0.05. Otherwise reject.

Data Analysis

Table 1: Pearson Correlation Matrix

	ROA	MKR	PFR
ROA	1.0000	0.2163	0.0201
EPS	0.2163	1.0000	-0.5082
ROE	0.0201	-0.5082	1.0000

Source: E-Views 10.0 Correlation Output, 2021

The Pearson Correlation Matrix in table 1 reveals that there is a positive relationship between MKR, PFR and ROA at coefficient values of 0.2163 and 0.0201 respectively.

Test of Hypotheses

Hypothesis One

H₀: There is no significant effect between market ratio and return on assets of food and beverage companies in Nigeria.

H₁: There is a significant effect between market ratio and return on assets of food and beverage companies in Nigeria.

Table 2: Panel Least Square Regression analysis testing the relationship between Market Ratio and Return on Assets

Dependent Variable: ROA
 Method: Least Squares
 Date: 05/31/21 Time: 12:56
 Sample: 2014 2019
 Included observations: 6

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.412527	0.186928	3.772251	0.0196
EPS	0.461007	1.040364	9.443121	0.0000
R-squared	0.346792	Mean dependent var		0.491667
Adjusted R-squared	0.291510	S.D. dependent var		0.123841
S.E. of regression	0.135181	Akaike info criterion		-0.903209
Sum squared resid	0.073095	Schwarz criterion		-0.972622
Log likelihood	4.709626	Hannan-Quinn criter.		-1.181077
F-statistic	13.16356	Durbin-Watson stat		1.512538
Prob(F-statistic)	0.000000			

Source: E-Views Regression Output, 2021

Interpretation of Regression Result

According to the result of the analyzed data in table 2, the function of Simple Linear Regressions was built in the model below:

$$ROA = 0.412527 + 0.461007EPS$$

Table 2 displays the findings of the pooled regression investigation into the functional link between ROA and Market Ratio (determined by Earnings per Share). As evidenced by the t-statistics = 9.443121 and p-value = 0.0000, the findings showed that EPS has a direct/positive association with ROA of quoted food and beverage companies in Nigeria. The outcome also demonstrated that, at a 5% level of significance, EPS is statistically significant in explaining changes in ROA. The model's overall statistical significance was tested, and the findings showed that it is statistically significant at the 5% level of significance with the Prob(F-statistic)= 13.16356. The 1.512538 Durbin-Watson statistics demonstrated that serial correlation was not a concern with the data.

Invariably, this study submits that there is a positive and statistically significant relationship between EPS and ROA of food and beverage companies in Nigeria at 5% level of significance.

Test of Hypothesis Two

H₂: There is no significant relationship between profitability ratio and return on assets of food and beverage companies in Nigeria.

H₂: There is significant relationship between profitability ratio and return on assets of food and beverage companies in Nigeria.

Table 3: Panel Least Square Regression analysis testing the relationship between Profitability Ratio and Return on Assets

Dependent Variable: ROA

Method: Least Squares

Date: 05/31/21 Time: 12:57

Sample: 2014 2019

Included observations: 6

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.496436	0.131602	3.772251	0.0196
ROE	0.006733	0.167788	5.440131	0.0017
R-squared	0.300402	Mean dependent var		0.491667
Adjusted R-squared	0.249497	S.D. dependent var		0.123841
S.E. of regression	0.138431	Akaike info criterion		-0.855689
Sum squared resid	0.076652	Schwarz criterion		-0.925103
Log likelihood	4.567067	Hannan-Quinn criter.		-1.133557
F-statistic	6.001610	Durbin-Watson stat		1.314084
Prob(F-statistic)	0.001712			

Source: E-Views 10.0 Regression Output, 2021

Interpretation of Regressed Result

$$ROA = 0.496436 + 0.006733ROE + \mu$$

The model above examined the relationship between ROA and profitability ratio (measured with return on equity). The findings indicate a strong positive link between ROE and ROA. The coefficients and probability of the t-statistic in table 3—1=0.006733, Prob =0.0017—show that this is the case. The likelihood of the ROE t-statistic is less than the permitted 5 percent. The amount of variations brought about on ROA by the explanatory variable (ROE) is further demonstrated by the R-squared, which is the coefficient of determination, to be 0.300402. According to this, ROE is responsible for around 30% of the variation in ROA, while the remaining 70% is explained by explanatory factors that are not included in this model and are reflected by the error term. Thus, the result indicates that the stated independent variable in the model is good enough to explain ROA. The significance level is 0.0017; this in essence shows that there is a significant relationship between the variables.

Decision

Considering the F-statistic = 6.001610 and its associated p-value of 0.001712, hence, we reject the null hypothesis and accept the alternative hypothesis, which upholds that there is a significant positive relationship between profitability ratio and return on assets of listed food and beverage companies in Nigeria at 5% level of significance.

Conclusion and Recommendations

This study investigated the connection between corporate performance of Nigerian food and beverage companies and financial ratio analysis. The dependent variable, corporate performance, was measured using return on assets while the independent variable, financial ratio analysis, was measured with market ratio and profitability ratio. Simple linear regression was used in this investigation. The information was gleaned from the annual reports of the companies under

investigation over a six-year period, from 2015 to 2020. The outcome of the regression analysis shows that, at the 5% level of significance, the market ratio and profitability ratio of listed food and beverage firms in Nigeria strongly relate with return on assets.

Recommendations

The researcher made the following recommendations based on the findings of this study, among others:

- i. The management of food and beverage companies should make optimal use of their costs to increase revenue for the business, maximizing shareholder value through increased earnings per share.
- ii. Because the profitability ratio is one of the key ratios used to gauge a company's financial health, food and beverage companies should lower their expenses as a percentage of total sales while maintaining their total cash fixed costs in order to boost their profitability margin.

REFERENCES

- Abu Hasheesh, K.(2003), “The Role of Published Accounting Information in Predicting of Stock Prices”, An Applied Study on Listed Corporations on Amman Stock Exchange , Al Basa’er Magazine/ Petra University, Amman, issue 2, 2003.
- Abu Shanab, S.A, (2008), “The Impact of Returns and Risks on share prices”, An Applied Study on Industrial Corporations listed at Amman Stock Exchange, unpublished Doctorate Thesis, Arab Amman University For Higher Studies, Amman, Jordan, 2008.
- Alkhyeli, S., Abdulla, F., Alshehhi, A., Aldhaheeri, N., Alhosani, M., Alsereidi, A., al Breiki, M., & Nobanee, H. (2021). Financial Analysis and Performance Evaluation of Pfizer. *SSRN Electronic Journal*. Published. <https://doi.org/10.2139/ssrn.3896385>
- AL Kurdi, A. (2005), “The Ability Range of Published Accounting Information on Stock Prices Prediction: An Applied Study on Public Shareholding Corporations on Amman Security Exchange, unpublished Doctorate Thesis, Arab Academy for Financial and Banking Sciences, Amman, Jordan, 2005.
- Almansoori, M. S., Almansoori, M. H., Almansoori, M. M., Almansoori, A. R., Alhammadi, A. A., Alnuaimi, S. M., & Nobanee, H. (2021). Financial Analysis of ADNOC. *SSRN Electronic Journal*. Published. <https://doi.org/10.2139/ssrn.3895246>
- Brigham, E.F. & Ehrhardt, M.C (2010). *Financial Management Theory and Practice*. 13th Edn., South-Western Cengage Learning, Mason, OH, ISBN: 1439078106 , pp: 1184.
- Ezejiolor, R. A., Olise, M. C., & John-Akamelu, R. C. (2017). Comparative analysis on investment decision of telecommunication and banking industries in Nigeria. *Journal of Finance and Economics*, 5(2), 65-75 Available online at <http://pubs.sciepub.com/jfe/5/2/4> ©Science and Education Publishing DOI:10.12691/jfe-5-2-4.
- Ezejiolor, R. A., Nwakoby, N. P., & Okoye, J. F. N. (2016). Comparative analysis of the investment decision of selected manufacturing firms and commercial banks in Nigeria. *International Journal in Management and Social Science*. 4(8), ISSN: 2321-1784 (Impact Factor- 5.276) 2056-5
- Husain, T., Sarwani, Sunardi, N., & Lisdawati. (2020). Firm’s Value Prediction Based on Profitability Ratios and Dividend Policy. *Finance & Economics Review*, 2(2), 13–26. <https://doi.org/10.38157/finance-economics-review.v2i2.102>
- James, C. (2009). “Basic Accounting 101- Asset Turnover Ratio: Inventory, Cash, Equipment and Accounts Receivable Analysis””, *Journal of asset turnover ratio*.
- Krishnan, V., Mann, R., Seitzman, N., & Wittkamp, N. (2020, November 5). Hospitality and COVID-19: How long until ‘no vacancy’ for US hotels? McKinsey & Company. <https://www.mckinsey.com/industries/travel-logistics-and-infrastructure/our-insights/hospitality-and-covid-19-how-long-until-no-vacancy-for-us-hotels>
- Lasher, W.R. (2005). *Practical Financial Management*. 4th Edn., South-Western College Pub., USA., ISBN-10: 0324260768, pp: 784.
- Lartey, V. , Antwi, S. & Boadi, E. (2013) , "The Relationship between Liquidity and Profitability of Listed Banks in Ghana", *International Journal of Business and Social Science*, Vol. 4 No. 3; March 2013, PP48-56
- Lermack, H., (2003). *Steps to a basic company financial analysis*. Philadelphia University, Philadelphia.
- Owolabi, S. A. and Obida, S. S, (2012). *Business Management Dynamics*, Vol.2, No. 2, pp10-25
- Krishnan, V., Mann, R., Seitzman, N., & Wittkamp, N. (2020, November 5). *Hospitality and*

- COVID-19: How long until 'no vacancy' for US hotels?* McKinsey & Company. <https://www.mckinsey.com/industries/travel-logistics-and-infrastructure/our-insights/hospitality-and-covid-19-how-long-until-no-vacancy-for-us-hotels>
- Maglad, R., Shaheen, D. R., & Samkari, M. (2019). Impact of Initial Public Offering on the Financial Performance of Petrochemical Industry in Saudi Arabia. *Proceedings of the International Conference on Industrial Engineering and Operations Management Riyadh, Saudi Arabia, 1*(2019), 23–28.
- Rashid, C. A. (2018). Efficiency of financial ratios analysis for evaluating companies' liquidity, *International Journal of Social Sciences & Educational Studies* ISSN 2520-0968 (Online), ISSN 2409-1294 (Print), 4(4), 110 IJSSES
- Thachappilly, G. (2009). "Profitability Ratios Measure Margins and Returns: Profit Ratios Work with Gross, Operating, Pretax and Net Profits". *Journal of profitability ratio measure margin and return*.
- Thachappilly, G. (2009). "Financial Ratio Analysis for Performance Check: Financial Statement Analysis with Ratios Can Reveal Problem Areas". *Journal of financial ratio analysis for performance evaluation*.
- Thachappilly, G. (2009). Liquidity Ratios Help Good Financial Management: Liquidity Analysis reveals likely Short-Term Financial Problems". *Journal of liquidity ratio analysis*.
- Tofeeq, J.(1997). Principles of financial management, Alexandria. Modern University Office, Egypt. Wright, P., C. Pringle and M. Kroll, 1992. Strategic management (text and cases).
- Ware, E. O. (2015). Liquidity management and its effect on profitability in a tough economy: (a case of companies listed on the Ghana Stock Exchange) *International Journal of Research in Business Studies and Management*. 2(11), PP 34-66 ISSN 2394-5923 (Print) & ISSN 2394-5931 (Online)